

June 25, 2007

Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Subject: Wilmington Bypass (I-140), US 17 to US 421, Brunswick and New
Hanover Counties
Final EIS; TIP R-2633 A/B
CEQ No.: 20070199; FHW-E40771-NC

Dear Dr. Thorpe:

The U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the subject document and is commenting in accordance with Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA). The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) are proposing to construct a new location freeway from US 421 to US 17 (Wilmington Bypass) in New Hanover and Brunswick Counties. The 14.2-mile new freeway is proposed to address traffic capacity deficiencies, mobility in the region, and hurricane evacuation. This project was placed in the NEPA/Section 404 Merger process in November of 2000 as a 'pipeline' project and after Purpose and Need (Concurrence point 1), Detailed Study Alternatives (Concurrence point 2) and the Least Environmentally Damaging Practicable Alternative (LEDPA) had been decided.

EPA provided scoping comments on the proposed project on July 12, 1991. EPA provided formal review comments to FHWA and NCDOT on the December 1996 combined Federal Supplemental DEIS (For R-2633C) and DEIS (For R-2633A/B) on March 28, 1997. EPA provided follow-up comments to the U.S. Army Corps of Engineers (ACE) Public Notice in a letter dated July 13, 2005, concerning the potential preparation of a supplemental DEIS for this portion of the project as well as some of the other outstanding environmental issues.

EPA along with other Merger team agencies concurred on Alternative 9 as the LEDPA on November 17, 2005. There were a number of meetings held in this period to re-evaluate the optimum alignment for Alternative 9 to avoid and minimize impacts to both the human and natural environment. EPA (along with the U.S. Fish and Wildlife Service and the North Carolina Wildlife Resources Commission) abstained from the re-concurrence of Concurrence Point 4A due to potential impacts to wetlands and streams and the Battle Royal Bay ecosystem. (See Attachment "A"). A re-evaluation of the DEIS was performed by FHWA in February of 2007.

In EPA's comments on the 1996 DEIS, Alternative 9 (Preferred alternative and LEDPA) was given a rating of "EC-2", Environmental Concerns, more information requested. While some of EPA's concerns have been addressed since that time, there are several outstanding environmental concerns that EPA's continues to have regarding the alignment ("Pink") selected within the Alternative 9 corridor. These environmental concerns are also detailed in the attachment to this letter (See Attachment "A")

In summary, EPA continues to have some remaining environmental concerns regarding impacts to stream and wetland systems and the Battle Royal Bay ecosystem, cumulative noise impacts to the Spring Hill community, and indirect and cumulative impacts to sensitive natural resources in the project study area. EPA plans to continue to work with the Merger Team to further address these issues through the hydraulic and permit review stages, including the detailed avoidance and minimization efforts for stormwater management and the use of Best Management Practices (BMPs). Should you have any questions about EPA's comments, please contact Mr. Christopher Militscher on my staff at (919) 856-4206 or by e-mail at: militscher.chris@epa.gov.

Sincerely,

Heinz J. Mueller
Chief, NEPA Program Office
Office of Policy and Management

Cc: K. Jolly, USACE Wilmington District
J. Sullivan, FHWA-NC
P. Benjamin, USFWS-Raleigh
J. Hennessy, NCDENR-DWQ

ATTACHMENT A
Wilmington Bypass, US 17 to US 421, New Hanover and Brunswick Counties
TIP# R-2633A/B

Specific Comments on FEIS

Project Description and Purpose and Need

The proposed project is a continuation of the other sections of the Wilmington Bypass that currently terminates at US 421. The FEIS describes the proposed action as an urban loop around Wilmington, North Carolina (Page S-2). EPA does not fully agree with this characterization as nearly all of the project study area is outside urban areas and is almost entirely in undeveloped, rural and suburban land use areas. This section of the Wilmington Bypass does circumvent the major urban area around the City of Wilmington and the towns of Leland and Navassa.

Project Alternatives and the Least Environmentally Damaging Preferred Alternative (LEDPA) or Preferred Alternative

EPA does not have any significant environmental concerns regarding the alternatives carried forward for detail study in the DEIS/FEIS or the selection of the LEDPA. After the re-evaluation conducted by NCDOT and FHWA during the Merger process, EPA concurred with other agencies on the selection of Alternative 9 as the LEDPA.

Stream and Wetland Impacts

There needs to be some clarification in the FEIS concerning the proposed number of stream crossings (Page 4-48). The FEIS also states that there will likely be more culvert crossings than are stated in the document (i.e, Pipes smaller than 72 inches). The data presented in Table 4-13 should be revised to match the narrative discussion on Page 4-48 of the FEIS. Stream systems that show 0 linear feet of impact should be either removed from the table or presented in a separate table to eliminate some of the confusion. Moreover, the impacts from the culvert extensions and the three new culverts (i.e., Table 4-12, Preliminary Hydrologic Crossings) do not appear to be accurately reflected in Table 4-13. On Page 4-47 of the FEIS, it is stated that the preliminary sizing of all culvert crossings was designed for inlet control under a 50-year storm. EPA believes that current FEMA and NCDOT hydrologic design requirements include passage of a 100-year storm. Thus, the structures proposed in Table 4-12 may be undersized for the stream systems listed (e.g., Morgan Branch and Alligator Branch).

EPA notes on Page 4-49 that temporary work bridges will be required to construct bridges over 'some' streams. On Page 4-74 of the FEIS, there is a discussion about the possibility of using temporary haul roads. EPA recommends the use of temporary work bridges for all wetland and stream crossings including those described in Table 4-17.

EPA notes that nearly the entire proposed project impacts to wetlands are to forested wetland systems (i.e., Palustrine forested – PFO) with 78.1 acres out of a total impact of 78.8 acres. EPA is concerned that these important wetland systems can be rated lower than other types of coastal wetland systems. These wetland systems vital functions in the landscape, including floodwater storage and groundwater recharge, habitat for wildlife, etc. From the wetland rating sheets contained in EPA's file, some of these wetlands appear to have been rated consistently lower than other types of wetlands. EPA recommends that NCDOT and FHWA consider re-checking the wetland ratings for the impacted systems to confirm their relative value.

EPA made a comparison of the project impacts to BASELINE wetland impacts per mile of highway improvement for Eastern NC new location projects and found that the proposed project has approximately 5.5 acres of impact per mile. The BASELINE for other new location Eastern NC projects is 2.58 acres per mile. The proposed project impact to wetlands is more than double the BASELINE. For additional comparison purposes, EPA found that residential relocations were 1.1 residential relocation per mile compared to 3.1 residential relocations per mile for Eastern NC new location projects. Stream impacts were approximately 70.6 linear feet of impact per mile compared to a BASELINE of 473.0 linear feet. Please note the aforementioned comment regarding the accuracy of stream impacts. While EPA recognizes NCDOT and FHWA's efforts to avoid and minimize impacts to residences and streams in the project study area, greater emphasis should be placed on minimizing impacts to jurisdictional wetlands.

It is also important to emphasize the new guidelines concerning jurisdictional determinations to waters of the U.S.; and that NCDOT and FHWA should confirm the jurisdictional determinations that were made for the impacted streams and wetlands. Ms. Kathy Matthews of EPA has previously forwarded the new jurisdictional form and instruction manual to NCDOT. Depending upon the time of permitting, NCDOT may be required to adhere to the new guidance and requirements by the ACE.

Additional Avoidance and Minimization Measures for Streams and Wetlands

As previously noted, EPA (along with the U.S. Fish and Wildlife Service and the North Carolina Wildlife Resources Commission) abstained from the re-concurrence of Concurrence Point 4A due to potential impacts to wetlands and streams and the Battle Royal Bay ecosystem. While the net increase in wetland impacts was only approximately 3 acres between the "Pink" and "Green" alignments within the Alternative 9 corridor, the original agreed to "Red" alignment had substantially less impacts to wetlands and streams. EPA abstained primarily due to the lack of initiative to propose additional avoidance and minimization measures for the "Pink" alignment, including potentially steepening of side slopes, use of retaining walls for high quality wetlands and stream system crossings, reduction in the median width at wetland and stream crossings, etc. While bridging some of the smaller, headwater systems along the "Pink" alignment would not have been shown to be cost-effective, there was opportunity to propose other avoidance and minimization measures as cited above that would have provided a better balance to the project's overall impacts to the human and natural environment.

EPA continues to have environmental concerns regarding the direct impacts to wetlands and streams and that NCDOT and FHWA should pursue additional avoidance and minimization measures for the “Pink” alignment during hydraulic and final design phases.

Stream and Wetland Mitigation

EPA notes that NCDOT believes that there are opportunities for on-site mitigation (Page 4-56 of the FEIS). EPA requests that these on-site opportunities be identified as soon as possible and that EPA be notified of the proposed plans. NCDOT has also indicated that mitigation for all remaining jurisdictional stream and wetland impacts will be through the Ecosystem Enhancement Program (EEP). EPA is also generally familiar with some of the former NCDOT mitigation sites that were transferred to the EEP (e.g., Dale Tract, Rowell Branch, Eagle Brunswick and McIntyre) and that these sites were utilized either in whole or in part for the other section of the Wilmington Bypass (R-2633C). It appears that there may be mitigation credits remaining at the Dale Tract and the McIntyre sites. There is no mention of these sites in the FEIS. EPA is concerned that more detailed information regarding the overall mitigation plans for jurisdictional impacts is not included in the FEIS. Considering the length of time this project was in the NEPA/Section 404 planning and permitting process, it would appear, that the development of a draft mitigation plan could have been provided in the FEIS. Please contact Ms. Kathy Matthews, EPA Wetlands Program, for any on-site mitigation field reviews or submittals of draft mitigation proposals.

Direct and Indirect Impacts to Battle Royal Bay Ecosystem and Other Natural Heritage Program Identified Priority Areas (IPAs)

The FEIS includes detailed information regarding North Carolina Natural Heritage Program (NHP) IPAs or Significant Natural Heritage Areas (SNHAs). Page 3-86 of the FEIS describes several of the SNHAs, including the “421 Sand Ridge”, the Alligator Branch Sandhill and Flatwoods, the Brunswick and Cape Fear River Marshes and Battle Royal Bay. According to Table S-1 and Table 4-14, direct impacts to the “421 Sand Ridge” IPA include a total of 18 acres of which 7 acres is in the primary area and 11 acres is in the secondary area. Table 4-14 includes new information that 19 acres of the Battle Royal Bay are within the new proposed right of way, but that 0 acres will be directly impacted. This appears to be different information than what has been provided to Merger team agencies in the past and that there would also be direct impacts to Battle Royal Bay, including the ‘primary’ IPA. The Environmental Impact Summary table dated January 18, 2005, revised, shows various direct impacts to Battle Royal Bay IPA ranging from 11.7 acres to 1.4 acres (within the right of way). From the September 12, 2005, Merger meeting handout, the maps included in the package show a direct impact to Battle Royal Bay IPA from all of the alignments – not just within the right of way limits but from the centerline of the roadway to the slope stakes as well.

This a very important issue to clarify since a substantial reason for EPA’s

abstaining from CP 4A, avoidance and minimization, was the increased potential direct and indirect impacts to the Battle Royal Bay IPA. EPA appreciates the environmental commitment (#2 Green sheet), regarding the fill slopes within the US 421 Sand Ridge SNHA to minimize direct impacts to populations of Pickering's sunflower (listed Federal Species of Concern).

EPA recognizes that there is also substantial development pressure within the project study area. Nonetheless, the greatest single potential impact to these SNHAs will be access from new infrastructure, including new roadways. One of the primary reasons for the "Pilot Comprehensive Transportation Planning" effort for Brunswick County was the recognition by NCDOT, FHWA and the other ILT members on the uniqueness and importance of these natural resources in this area of North Carolina. This includes upland SNHAs, not strictly 'jurisdictional' areas. There are numerous state and Federally-listed plant and animal species within the project study area and this project will cause massive habitat fragmentation (EPA notes Figure 4-4, et al., Location of Wildlife Crossings). However, the FEIS fails to address the requirements of Executive Order 13112, Invasive Species.

It appears that one of greatest threats to endangered and threatened plant species for this project will come not from direct impacts, but indirect impacts including the introduction of aggressive significant threat invasive exotic plant species. The pristine ecosystems of the SNHAs, including Battle Royal Bay, which have survived relatively unchanged for more than 200 years will be severely and permanently impacted from invasive exotic plants species within years after construction of the new roadway is completed. In turn, wildlife habitat will become degraded and threatened and endangered animal species will also be impacted over time (Please see the FHWA website at <http://invasivespeciesinfo.gov/docs/plants/roadsides/htm>).

EPA, along with FWS and WRC, proposed some conservation area measures for the "Pink" alignment in a memorandum dated February 22, 2005. NCDOT nor FHWA responded to this proposal and the FEIS does not address the issues raised in this memorandum concerning aggressive invasive plant species along this 14.2-mile new location freeway. Foremost of EPA's concerns is the fact that the new highway right of way will become a major avenue for invasive exotic species to impact the Battle Royal Bay ecosystem and other SNHAs. FHWA regulations allow for the mitigation of all significant project impacts, not just for jurisdictional impacts to streams and wetlands. We recommend that NCDOT consider strict Best Management Practices (BMPs) in its Record of Decision (ROD), including the restriction of clearing grubbing, replanting with native plants, pro-active soil stabilization with locally native plant species, and the early identification and eradication of invasive exotic species (including all of the N.C. Native Plant Society's Significant Threat Species; <http://www.ncwildflower.org/invasives.htm>). EPA has also identified a significant threat from Japanese knotweed invasions in eastern North Carolina resulting from the placement of fill dirt and stone and requests that NCDOT and FHWA require construction contractors to 'pre-screen' sources of fill dirt and stone to minimize the accidental spread of this significant threat species. In addition, EPA requests that NCDOT and FHWA work directly with the NHP and local

planning officials to assist them in protecting and preserving these SNHAs in the spirit of environmental stewardship.

Noise Abatement

The FEIS addresses a potential noise wall at the southwest quadrant of the interchange at SR 1430 (Cedar Hill Road) where there are approximately 16 impacted noise receptors. EPA recommends that NCDOT and FHWA consider additional noise abatement measures for the US 17 interchange as this location actually has the largest number of impacted noise receptors on the project (Table 4-6; 21 receptors impacted based on approach or exceeding Noise Abatement Criteria). While these 21 noise receptors near the Spring Hill Community are not expected to be impacted by a substantial noise level increase, there will be future foreseeable projects (e.g., U-4738) in the area that may cause these noise levels to be further increased.

Mobile Source Air Toxics (MSATs)

EPA acknowledges that the FEIS addresses MSATs in the form of FHWA's Interim Guidance (Pages 4-28 to 4-31). EPA has previously provided NCDOT and FHWA with detailed comments on other projects concerning this type of qualitative assessment that is being inserted into various NEPA documents. Again, EPA can not concur on this assessment due to the reliance on future EPA vehicle and fuel emission control regulations and FHWA's lack of acceptance of EPA tools in performing air modeling for MSATs. While the specific quantitative analysis is lacking in the FEIS, there is a potential for increased MSAT emissions in the location of the Spring Hill Community as vehicle traffic will be concentrated there as opposed to current conditions. There is no real time monitoring data provided in the FEIS that can substantiate if there is or there is not an existing MSAT problem. Based upon the lack of actual quantifiable data on MSATs near the Spring Hill Community, it is impossible to ascertain if there is not an existing problem or what effect this new road and interchange will have on near roadway receptors. There are FHWA plans to connect the Cape Fear Skyway project (U-4738) interchange at the US 17 interchange for the Wilmington Bypass. This additional interchange across from the existing US 17 highway could have a cumulative adverse effect on the residents of the Spring Hill Community. However, without actual background data, it is not possible to predict what the health effects of MSATs will be on any specific community within the project study area.